one inch from the edge of the wound on one side, and bring it out at the distance of one inch from the edge on the opposite side. This suture will include two inches of skin; the thread should be tied so as to gather up this skin over the abdominal ring. Two such sutures should be employed, at the distance of little more than an inch from each other. In this way a natural pad will be formed, which will adhere to the aperture of the ring, and which may be sufficient to prevent the subsequent descent of the hernia.

ART. II.—*On the Pathology of Remittent Fever.* By JOHN A. SWETT, M. D., Physician to the New York Hospital.

DR. STEWARDSON, in his Essays on Remittent Fever, published in the *American Journal of the Medical Sciences*, of 1842 and '43, first called the attention of the profession to a peculiar condition of the liver as the anatomical characteristic of that disease. Being in attendance in the medical wards of the New York Hospital, during the months of August, September and October of the past year, the season when many cases of remittent fever are usually admitted, especially from the sailors who arrive from our southern ports, I determined to prosecute his inquiries. Unfortunately, for this object at least, but few fatal cases have occurred, and I would hesitate to communicate the few facts that I have to offer, did I not believe that new opinions can only become confirmed by the concurrent testimony of many independent observers.

The whole number of cases admitted to the hospital, during the three months, was thirty-four; of these, five terminated fatally, on the 12th, 13th, 14th, 18th and 20th day of the disease. The mean duration of the disease in twenty-three favourable cases, where it could be accurately noticed, was fifteen days, the maximum twenty-four days, the minimum ten days. The regularity with which the disease terminated in favourable cases is, I think, a striking feature in its history. In cases where the convalescence was protracted beyond the usual term, it appeared to me to be owing more to the existence of some complication than to the severity of the attack. The patients were generally young men, the average age in thirty-two cases being about twenty-two years. They were all attacked in a few days after leaving the port in which they had been exposed to the causes of the disease, usually about the eighth day, never later than the fourteenth. Twelve patients came from the ports of North Carolina, especially from Wilmington; eight from Virginia, especially from York and James rivers; nine from Savannah; one only from Charleston, S. C., one from Baltimore, one from Havana, one from Rochester, one from the Mississippi and Ohio rivers. No case entered the hospital in which the disease appeared to have

dominal ring, and whether it is not always situated in the neck of the hernial sac. In most of the cases of inguinal hernia, which we have had occasion to see, the strangulation was in the external abdominal ring, and the division of this part relieved the stricture, and allowed the hernia to be returned without any interference from the neck of the sac. None of the cases here described, go to show that the stricture was in the mouth of the sac. I have, however, operated on cases where the stricture was at the upper ring, and some of these might, no doubt, be cases where the stricture was produced by the neck of the sac, but they are comparatively rare.

Another doctrine has been maintained by high authority, which teaches, that a considerable proportion of cases of supposed strangulated hernia are cases of inflammation of the hernial sac. The history of the instances falling within our experience, does not afford any support to this doctrine; and the appearance of the hernial contents in those operated on proves that they were inflamed from interruption to their circulation. In case fourth, for example, the intestine below the stricture was nearly black, but when an additional portion was drawn from the cavity of the abdomen, for the purpose of disengaging it from the stricture, the part thus drawn out was not discoloured. None of the cases reported in this article support this doctrine of peritoneal inflammation, and although such cases may sometimes present themselves, their occurrence is, we believe, exceedingly rare.

The practicability and utility in some instances of dividing the stricture, without opening the hernial sac, have been established by the experience of various eminent surgeons. We have here mentioned two cases, the first and third, in which this practice was employed with perfect success; in the case of crural hernia in the male, it was attempted, but could not be executed. On the whole, we think that this method of operating should be tried more frequently than it has been heretofore; we may even say that it should be generally attempted. In cases where there was reason to suspect gangrene of the hernial contents, it would be improper; in such it would be proper to open the sac and give the gangrenous part an opportunity of separating. In cases where the stricture was in the neck of the sac, whether at the lower ring or the upper, this operation would be inapplicable, but such cases, we apprehend, are not very frequent.

The last point which remains to be noticed is, the possibility of conducting the treatment, subsequent to the operation, so as to give the patient some security against the return of the rupture after his recovery. This has been fully shown in case fifth. In this case the patient wore a bandage for a few days; after the adhesion of the wound, it was discontinued. When he arose from his bed, afterwards, while he walked about the wards, and when he quitted the hospital, he had neither truss nor bandage, nor was there any appearance of the descent of the intestine. The plan to be recommended to gain the desired end, is the following. In bringing the wound together after the operation, introduce the needle for making the suture, at the distance of

tenderness on pressure, particularly over the stomach. This was usually slight, and not accompanied by pain as the general rule, even on careful questioning. This tenderness was commonly united with a certain degree of tension of the muscles, as might indeed be expected; it seldom extended to the region of the liver or the spleen. Thus while tenderness of the epigastrium is noticed sixteen times, in only two cases did it extend to the right hypochondrium, and in only four cases to the region of the spleen, although this latter organ was at the same time enlarged. (Six cases.)

Vomiting was a more frequent symptom, still it could seldom be regarded as an urgent one. Many of the patients had vomited before they reached the hospital, owing sometimes to emetics, which appeared, however, to do them more harm than good, sometimes perhaps to improper articles of drink, and still more frequently, I think, in connection with the chills that mark the early period of the disease. This symptom frequently ceased spontaneously after admission to the hospital, although I find that it occurred in sixteen cases after their admission, but never in excess. The matter vomited was the simple drinks that the patients used, frequently tinged a little with greenish or yellowish bile—in a very few instances only could the matter vomited be called emphatically bilious.

I would remark, also, that the tongue was usually coated, first with a thin white, at length with a more thick and dirty coat, but remained moist to the end of the disease, in at least two-thirds of the cases; it is noted as becoming dry in twelve cases only.

Bronchitis occurred in twelve cases, sometimes with mucous rattle, oftener without it. I should believe this to be an important complication, did it lead to the production of pneumonia, the immediate cause of death, I think, in two of the fatal cases; I cannot, however, discover any immediate connection.

The nervous symptoms, properly speaking, seem to me to constitute an important feature of this disease. The prostration of strength which accompanies the onset, was frequently the most prominent symptom throughout the disease in the estimation of the patient. Subsultus tendinum was occasionally noticed, (five times.) In one case, violent convulsive motions with opisthotonos occurred; the case, however, recovered, although the convalescence was protracted to the twenty-second day. Delirium was noticed in five cases, and stupor in nine cases. It is probable that few or no patients escaped more or less pain in the head and vertigo; it was not, however, noted in more than one-half the cases.

In no case were sudamina about the neck, or rose-coloured spots upon the abdomen noticed, although they were carefully looked for.

The urine was generally of natural appearance, and without sediment throughout the disease.

The treatment adopted was extremely simple. During the earlier periods of the disease, the patients were usually purged every second day by calo-

been contracted in this city or the neighbourhood, although it is said to have been more or less prevalent in these localities.

It is not my intention to enter into an analysis of the symptoms, beyond offering a few general statements. The cases, it is believed, presented no unusual features, and the detail of the symptoms would, therefore, be tedious. Most of the cases were ushered in by a chill, (twenty-three times in thirty-one cases). In two cases it was expressly stated that no chill occurred; it is possible that it may have been forgotten. The chills appeared irregularly, and usually ceased about the second day, occasionally at a much later period; twice on the sixth, the eighth, twice on the ninth, twice on the eleventh, and once as late as the thirteenth day. The febrile symptoms, heat of skin and acceleration of pulse, were always present when the patients entered the hospital, and usually continued until about the third day before convalescence. In most of the cases, an exacerbation came on about four o'clock, P. M., and continued until some time during the night, during which the pulse usually rose to 106—112, with a general aggravation of the symptoms; while in the morning it would be found from 96 to 100. In many cases, however, this remission in the symptoms was by no means so decided, and in some cases not more so than in the cases of continued fever, many of which have been observed in the hospital during the present season, and carefully compared with the cases from the South. So that the physician who should attempt to found his diagnosis of the two diseases upon the character of the remissions only, would not unfrequently find himself without a sure guide.

The symptoms of biliary derangement which have also given a name to the disease, were carefully noticed. In many the secretion of bile, as marked by the stools, was much increased in quantity or altered in its colour, so as to constitute one of the most striking symptoms of the disease. This was observed in fifteen, or about one-half the cases; while it was also noticed in many, even of the worst cases, especially among those which were admitted early in the season, that no apparent deviation from the healthy standard took place. The same may be observed of yellowness of the eyes as a symptom of biliary derangement—this symptom was observed in twenty-two cases; still it was entirely wanting in others where the disease was well marked.

Diarrhœa was absent in almost every case. All the patients required the use of purgatives at some period of the disease; they usually acted freely, but without leaving any symptoms of irritation behind them; on the contrary, they frequently afforded decided relief. Tympanitis, even in the cases where prostration was most marked, seldom or never existed, and the absence of abdominal pain and tenderness over those portions occupied by the intestines was also noticed. In one case only, there was much abdominal pain and tenderness—in this case, it was regarded as neuralgic. Over the upper portion of the abdomen the patients frequently complained of

mel, grs. x., followed in a few hours by castor oil, ℥i. A marked degree of stupor was at once met by local depletion and ice to the head, or if the patient appeared too feeble for this, a blister was applied to the nucha. Vomiting and pain at the epigastrium were met by leeches to the part, and the free use of ice internally. As soon as decided remissions appeared, quinine was administered, a grain every two hours in solution. In cases, however, where no remission occurred, and where the patient appeared much exhausted, with a feeble pulse, a dry tongue and moderate heat of skin, the quinine was still administered, and sometimes in combination with stimulants. Occasionally this treatment was obliged to be interrupted, but generally it answered the best expectations, even when stupor and other prominent local symptoms were present. The most formidable symptoms we encountered were those of collapse. In two cases they proved fatal, and in a third, a patient whose case had presented nothing alarming, was suddenly seized with symptoms of this nature, and was only saved by the use of powerful stimulants. On reviewing the cases that have fallen under my care, it has appeared to me that the prominent symptoms threatening a fatal termination, have promptly yielded if promptly met, and that a large proportion of even severe cases will terminate successfully, if too much is not attempted during the ordinary progress of the case. The expectant method of treatment, founded in reason and experience, is, above all, applicable to fevers whose progress appears to be self-limited, although far from being uniform.

I have preferred introducing a full report of the five fatal cases as they are found in the medical register of the hospital. The notes were taken from dictation, by the Senior Walker, at the regular visit at one o'clock, P. M.

Case I.—W. A. Tuttle, ætat. 24, born in Connecticut, seaman, entered the New York Hospital, August 5th, 1844. He had usually enjoyed good health, until about three months before his admission, while at Porto Rico. He there became affected with diarrhœa, four to eight stools in twenty-four hours, which has continued to the present time. His passages have varied in colour, from green to brown, and his disease has been subjected to no treatment. Eight days ago he left Wilmington, N. C., and arrived in New York on the 4th. He was well during the voyage, with the exception of his diarrhœa, which did not affect, materially, his health, until two days ago, the day before his arrival. He was then seized with pain in the head, back and limbs, followed by a chill. On admission, he complained, also, of pain in the epigastrium, and in the left hypochondriac region; his stomach was quite irritable; tongue coated, white and moist; skin warm; pulse 104, regular. Has taken a dose of calomel and jalap, which vomited and purged him.

9th. Complains of dizziness and ringing in the ears; tongue slightly coated and moist; tenderness on pressure over the upper portion of the

abdomen, which is free from tympanitis; two or three stools in twenty-four hours; urine natural in appearance. Skin hot; pulse 100.

10*th.* Delirious last night; rational to-day, but rather stupid; no headache; tongue covered by a thin white coat; tenderness on pressure at the epigastrium. One stool; pulse 112, soft, of moderate strength; skin warmer than natural.

11*th.* Delirium at night, a little wandering to-day; less stupor; no pain in the head. Tongue white, moist. Five stools; no tympanitis; abdomen generally a little tender on pressure. Skin cool; pulse 96, regular, soft, of moderate strength.

In the evening the pulse had risen to 108, with hot skin; the patient appeared to be sleeping.

12*th.* Stupor, from which the patient cannot be roused; respiration laboured and noisy; alæ nasi flaring; tongue rather dry; three stools; abdomen soft, not distended; pulse 124, feeble, regular. Died comatose at 10 P. M.

Post-mortem examination fourteen hours after death.

Brain natural, presenting about the usual degree of venous congestion.

Lungs healthy, lower lobes somewhat congested, as is usual.

Stomach of the natural size, containing a small quantity of viscid, greenish fluid. Its mucous membrane covered with brownish mucus, appeared more vascular than natural. In the cul-de-sac this vascularity was arborescent, and apparently venous with small patches of ecchymosis near the cardiac orifice. The anterior and posterior surfaces were of a faint, pinkish brown hue, formed by numerous minute points in clusters. On the lesser curvature, near the pylorus, the membrane was pale and strongly contrasted with the rest. The natural consistence and thickness of this membrane were preserved.

The mucous membrane of the duodenum was injected like that of the stomach, otherwise natural; its mucous follicles not remarkably distinct.

The small intestines containing their fœcal matter of natural colour, were perfectly healthy; a little venous congestion existed near the end of the ileum.

The liver of natural size, presented externally a bronzed appearance; internally it presented an uniform olive tint; the granular structure was less distinct than natural. The organ was slightly softened, and discharged, when pressed, a considerable quantity of thin blood. The gall bladder was filled with viscid brownish bile, like thick molasses.

The spleen was rather large, and perhaps rather more soft and congested than usual, but not materially diseased.

Kidneys healthy; abdominal veins not congested. By accident, the condition of the large intestines has been omitted in the notes.

Case II.—Francis Lobey, ætat. 40; Ireland; engineer; entered the New York Hospital, August 29th, 1844. The patient was seized seven days

ago, while coming down the canal from Rochester, with a chill, pain in the head, limbs and abdomen; loss of appetite and vomiting, which symptoms have continued, for the most part, to the time of his admission. Complains of dizziness; tongue large, covered with a dirty white coat; tenderness at epigastrium; abdomen soft, bowels disposed to be loose. Skin of natural temperature; pulse 80.

Sept. 1*st.* Chill followed by fever yesterday afternoon, and vomiting. Skin to-day cool; pulse 88. Sulph. quinine.

2*d.* Has been sitting up this morning. Complains of a little headache; has vomited; pulse 100.

3*d.* Fever last evening, but no chill; pulse 92; this morning pulse 84; vomiting; two or three stools without medicine; abdomen soft, free from tympanitis; no tenderness on pressure, but coughing, of which he now complains, causes some pain in the region of the spleen.

4*th.* Fever last evening, no chill; skin this morning cool; pulse 100; eyes suffused; tongue dry and brown in the centre, moist at the edges; no inclination to vomit; thirst. The pain over the region of the spleen, on coughing, continues, and there is now some tenderness on pressure extending backward towards the region of the kidney; percussion and auscultation natural. Three stools.

5*th.* Nausea last evening, none to-day; slight tenderness in epigastrium and left hypochondrium; three dark, slimy, bilious stools; pulse 84; skin cool. Calomel, grs. x., followed by oil.

6*th.* Violent chill last evening, followed by little or no reaction; pulse 88, soft; tongue covered with a dirty yellowish coat, but moist; several stools after the oil, of good colour.

7*th.* No chill last evening; pulse 96, full. Three dark green slimy stools; no pain or tenderness in abdomen; tongue covered with a thick yellow coat, and dry. Calomel and oil.

8*th.* Last evening a chill, followed by fever and sweating, the excitement continuing all night. This morning the skin is cool; pulse 100; tongue dirty and dry; no vomiting. Slight tenderness in epigastric and hypochondriac regions; abdomen soft, free from distension; three stools, dark and slimy. Disposition to stupor.

9*th.* In the afternoon of yesterday the stupor had disappeared; but in the evening it returned with febrile excitement, but no chill. Stupor continues; pupils much contracted; head hot; pulse 140, feeble; is constantly groaning; respiration laborious. Lips and tongue dry; bowels freely open; abdomen not distended. Leeches; ice to head. Stimulants internally.

10*th.* Revived a little in the evening, but not sufficiently to answer questions. Although moribund, the skin is hot and perspiring; the heat of the head is pungent, notwithstanding the application of ice; pulse feeble, accelerated. Died an hour after the visit at 2, P. M.

Post-mortem examination eleven hours after death.

Brain not more congested than usual; slight sub-arachnoid effusion; about a drachm of fluid in the occipital fossa. The substance of the brain on the left side softer than on the right, particularly that portion forming the walls of the ventricle; the superficial portion of the optic thalamus being reduced to a white pulp. A little bloody serum was found in the posterior cornu; plexus choroides pale and full of small cysts. Ventricles not enlarged.

Lungs. Bronchial tubes much dilated, filled with a bloody frothy fluid; mucous membrane transparent, but a good deal of congestion beneath it. The lower lobe of both lungs was in the first stage of pneumonia, passing into the second stage at some points. Upper lobes the seat of marked pulmonary œdema.

Heart flabby, a little soft; containing a small quantity of fluid blood in the ventricles.

Stomach small, containing a thin dark green fluid. The mucous membrane of the left half of the organ was strikingly injected, and contrasting strongly, with its reddish-brown colour, with the pale yellowish tint of the right portion. The injection, when carefully examined, was ramiform and apparently venous. The mucous membrane was neither softened nor otherwise altered from its natural condition, unless on the anterior wall near the pylorus, where it was a little mammillated and thickened, although of a pale natural colour.

In the first three inches of the duodenum, the mucous membrane was of a light reddish-brown tint, but otherwise natural; the mucous follicles did not appear enlarged. The mucous membrane of the jejunum was of yellowish tint, and its cavity filled with a yellow viscid matter. The glands of Peyer were very distinct, contrasting strikingly, by their dead white colour, with the yellowish mucous tissue around them; but they, like the membrane about them, were neither thickened nor altered in consistence. In the ileum these glands were less distinct, and in the lower portion the intestine had a perfectly natural appearance; its mucous membrane was a little softened. Large intestines healthy, except in the rectum, where large dark patches of mucous membrane were found, but without softening or increased thickness; and with enlargement of the mucous follicles, evidences of chronic irritation.

Liver of natural size, bronzed externally, mixed with portions of a pale slate colour; this bronzed appearance being most marked over the anterior portion of the right lobe. Internally, the substance of the organ presented a muddy yellowish olive tint, the granulations still visible, but not as distinctly as natural; the change in colour was uniform. The liver felt more flabby than usual; but its tissue was not materially softened; on pressure, a little thin bloody fluid exuded. Gall bladder distended with a thick viscid bile, like molasses in colour and consistence.

Spleen enlarged, flabby, much softened.

Case III.—Mayo, ætat. 25, native of Massachusetts, seaman, entered

the New York Hospital, October 24th, 1844. The patient had arrived a week previous from Savannah, and was seized four days ago with pain in the limbs, loss of appetite, irregular chills followed by fever. At the time of his admission, he complained of pain in the head and dizziness; anorexia, thirst; tongue covered with a thin white coat, moist; no vomiting; no tenderness or distension of abdomen; no cough. Skin a little warm; pulse 112, regular, of good strength. Eyes a little injected, but aspect not materially altered. Bowels regular.

25*th*. Headache and dizziness continue; slight tenderness in epigastrium; no nausea; the spleen can be felt projecting under the ribs, but is not tender on pressure. No stool since yesterday; pulse 108, soft. Calomel, grs. x., followed by oil.

26*th*. Pulse 120; skin hot; last evening pulse 104. Headache and dizziness; tongue covered with a thin white coat, moist as before; abdomen free from tenderness, soft. The calomel and oil have operated very freely.

27*th*. Passed a restless night; complains of weakness, of headache and noises in the ears. Slight tenderness in the epigastrium, but no nausea; patient states that he has some appetite. No stool; pulse 100; skin a little warm. Calomel and oil.

28*th*. Pulse 110, regular; skin warm; feels about as yesterday; one stool from the purgative.

29*th*. Restless night; pulse 116; skin hot; bowels freely open, stools thin, but of healthy colour; slight tenderness over abdomen, particularly in the regions of the stomach and spleen.

30*th*. Complains of weakness; pulse 120, soft and feeble; subsultus; one or two stools; tongue looks well; no nausea. Ordered wine.

31*st*. Pulse 120, soft and feeble; subsultus continues; tongue continues clean and moist; no nausea; slight epigastric tenderness; abdomen soft; one stool. Has used wine freely.

Nov. 2*d*. Disposition to stupor and muttering, but no decided delirium. Slight pain in the head; tongue dry in centre, moist at tip, protruded with difficulty; soreness about the lips, which are disposed to bleed. Skin sallow, eyes yellow; abdomen soft, free from pain; two stools. Skin warm and harsh; pulse 100, rather feeble, but regular. Takes wine and arrow-root, also quinine, gr. i., every two hours.

3*d*. About as yesterday.

4*th*. Improved; slept quietly last night; had an injection this morning, which operated well, and revived him a good deal; aspect less dull, but eyes still yellow and complexion sallow. Tongue coated, white and moist; sulcated; abdomen soft and free from tenderness; skin warm and soft; pulse 104, regular, of good strength. Complains of no pain.

5*th*. Disposed to stupor; aspect dull, pale and sallow, eyes yellow and suffused; ulcers about nose and lips, which constantly bleed; will not protrude his tongue, but lips and teeth covered with sordes. Abdomen soft, no

tenderness or tympanitis; skin warm; pulse 92, of moderate strength; cough, with expectoration of dirty mucus; respiration oppressed.

6th. Passed the night pretty comfortably; now constant jactitation; twitchings of the muscles of the face and arms; constant groaning and muttering; does not speak, but appears to be conscious; eyes closed, pupils rather contracted; sordes on the teeth; tongue not protruded. Respiration 40, irregular, and with deep catching inspirations. No stool for 48 hours; pulse 132, small and feeble; skin warm and moist. Continues wine.

Evening. Jactitation and stupor continue; cannot swallow; pulse 160, small and feeble. Death at 7 A. M., Nov. 7th.

Post-mortem examination four hours after death. No external marks of decomposition; no tympanitis; skin generally of a yellowish tinge.

Head.—The brain and membranes were quite natural, except that traces of ancient arachnitis existed; the fissure separating the antero-inferior portion of the two hemispheres being united by old and organized adhesions; trifling adhesions also existed over the tentorium; the membranes generally adhered with unusual firmness to the cortical substance.

Thorax.—Both lungs were the seat of pneumonia, the lower lobes being principally affected, although in the right lung the inflammation had climbed up the posterior portion to the very apex; it was of the lobular form; nodules of granulated and softened texture and of a light red colour, surrounded by portions of a brownish-red or livid colour, in some parts dry, in others giving out a viscid reddish fluid more or less aërated. The bronchi were inflamed, the mucous membrane being injected and softened, and the tubes filled with a frothy mucus. The heart, rather large, contained a moderate quantity of blood in the right side, the left being contracted and nearly empty. A few drachms of serum in the pericardium.

Abdomen.—The stomach, somewhat smaller than usual, contained a considerable quantity of a thick, yellowish fluid, and but little mucus; its mucous membrane presented numerous large, transverse folds, with difficulty obliterated by pressure. It was evidently thickened in every part, but especially in the cul-de-sac, where it was also distinctly mammillated; its consistence was increased, but its natural colour was preserved, except on the posterior surface of the cul-de-sac, where several large bands, formed by a punctated and arborescent redness, with slight ecchymosis, existed. On these, however, the mucous membrane preserved the consistence and thickness noticed in the pale portions. No enlarged follicles were observed. The submucous and muscular coats, especially the latter, were also decidedly thickened.

The mucous membrane of the duodenum presented some punctated and arborescent redness, especially at the lower portion; here, also, the glands were unusually distinct. No decided softening or thickening was noticed.

The jejunum was healthy, except a few enlarged follicles in its upper portion; it was stained by brownish bile, and contained a considerable quan-

tity of thin, healthy, fæcal matter. Distinct but not excessive venous arborescence was noticed.

The ileum was thickened in all its coats, increasing from above downward; its mucous membrane was generally pale, with now and then patches of venous arborescence and of increased consistence. In the lower portion, the isolated follicles, as well as the glands of Peyer, were evidently hypertrophied, but pale, firm, and without any trace of ulceration or of surrounding injection. This intestine contained little fæcal matter. The hypertrophy of the intestinal canal extended in a slight degree to the large intestines, but without enlargement of the follieles. In the cæcum, much venous arborescence was noticed. The mesenteric glands were slightly hypertrophied, but pale and firm. The mesenteric veins were but slightly congested.

The liver presented, externally, a slate colour, which, when placed in a proper light, gave a fine bronze tint; internally, it was olive, tinged with yellow. The granular structure was quite distinct, and each granule was surrounded by a ring of vascular injection; the organ was of natural size, perhaps slightly softened in its tissues, giving out, when pressed, a moderate quantity of thin, bloody fluid. The gall-bladder contained a moderate quantity of viscid bile, of the colour and consistence of the dregs of molasses.

The spleen was large, but probably not beyond the normal size; it was decidedly softened, but not congested; bluish externally, internally of a dull brown colour. Pancreas and kidneys healthy.

In this case, the thickening of the coats of the stomach and intestines, the hypertrophy of Peyer's glands, was evidently an ancient affection, long anteeedent to the attack of fever.

Case IV. A boy, ætat. fourteen years, of good constitution, was taken with symptoms of remittent fever while on the voyage from Georgetown, S. C., on the 13th of August. He entered the New York Hospital on the 24th. It appeared that he had received no medical attendance, and that his personal comfort had been much neglected, so that at the time of his admission, he was quite feeble and cold. Stimulants, however, revived him, so that in the evening there was high febrile excitement; but his intelligence was good, his tongue moist, his abdomen free from tenderness.

25*th.* Remission; no nausea; no abdominal tenderness; pulse accelerated; skin cool. Ordered quinine. In the evening, an exacerbation with restlessness and general pain, came on; the restlessness continued to increase and became excessive; the skin cold; the pulse so feeble that it soon ceased to beat; the intellect unimpaired. Death occurred in about one hour after the urgent symptoms were noticed.

Post-mortem examination sixteen hours after death.

Head natural.

Lungs somewhat congested in the lower lobes; traces of bronchial inflammation.

Stomach.—The mucous membrane was generally of a pale, brownish tint; on the anterior surface, a large, pinkish patch, from pointed injection was noticed. A dirty, viscid mucus adhered to the membrane, which, in the cul-de-sac, appeared slightly thickened, but everywhere of natural consistence; no follicles noticed. The organ contained a considerable quantity of a dirty, brownish-yellow fluid, of a sour smell.

The mucous membrane of the duodenum presented the same brownish tint as the stomach, but no injection, no softening or increased thickness. The small intestines were healthy, presenting in different parts patches of venous injection. The glands of Peyer were unusually distinct, but not apparently diseased; also the isolated follicles near the extremity of the ileum. The large intestines were healthy.

The *liver* was of the natural size. Externally, it presented a bluish-gray colour, with patches of bronze, especially on the anterior surface of the right lobe; internally, the organ was of a dull brownish hue, with a tinge of green and yellow, (olive.) The capillary vessels of the liver were unusually distinct, forming delicate circles, and, where most numerous, giving the part a reddish hue. The liver, however, was not loaded with blood nor softened in its tissue. The gall-bladder was full of a dark viscid bile, like molasses.

Spleen enlarged, rather softened and congested.

Kidneys natural.

Case V. A young man, ætat. about twenty-five years, was brought to the New York Hospital at about 6 P. M., Aug. 28th, 1844. He was at that time able to walk from the main to the north building; his pulse was of good strength, and he was in the full possession of his intellect. He stated that he had lately come from New Orleans by the Mississippi and Ohio rivers, and that during the voyage he had indulged in dissipation; that he was taken ill at Wheeling twelve or fourteen days previously with symptoms of fever, viz., chills followed by heat, pain in the head and limbs, vomiting, loss of appetite, &c., and that he had continued ill ever since. About 8 P. M., he was seen again by the resident physician and found to be rather feeble and sinking; a little wine was ordered. At 9 P. M., I found him in a state of collapse; skin cold, nearly pulseless, excessive jactitation, complaining of severe pain in the thighs, but of none in the head or abdomen; intellect not affected. His tongue was slightly coated but moist; he had retched once since his admission, but had not vomited or purged. The free use of stimulants internally and externally did no good. He died at 10 P. M.

Post-mortem examination thirteen hours after death.

Head natural; slight subarachnoid effusion.

Lungs somewhat congested with venous blood and frothy serum in the lower lobes; bronchi containing frothy mucus; livid from submucous injection.

Heart natural.

Stomach of natural size, containing about a pint of dirty yellow fluid mixed with mucus. The mucous membrane, more or less covered by viscid mucus, was generally of a dusky red colour, less marked along the lesser curvature, and least of all in the pyloric portion. This redness, when carefully examined, was found to be formed by minute points, in many parts so closely clustered as to form spots. A portion of the posterior surface was tinged green, probably by bile. The membrane generally was mammillated and thickened, but this existed in the most marked degree in the cul-de-sac, diminishing towards the pylorus, (hypertrophy.)

The mucous membrane of the duodenum was of a dusky red colour for the first inch from the pylorus; the remaining portion was of a dirty yellowish-green colour; it appeared natural in consistence and thickness, and the mucous follicles did not appear at all enlarged. The mucous membrane of the jejunum was also tinged with the same dirty yellow or greenish colour, most marked about the upper portion, and which gradually disappeared in the ilcum. The glands of Peyer were very distinct, from their pale white colour contrasting strongly with the dirty hue of the surrounding mucous membrane. The glands, however, as well as the mucous membrane, were neither thickened, softened nor injected, save a little venous arborescent injection in a few portions. A few enlarged, solitary follicles, were also noticed near the end of the ileum. The large intestines were healthy. The mesenteric glands were generally hypertrophied, but natural in consistence and colour.

The *liver* was of natural size; viewed as a whole externally, it presented a pale slaty colour, and in many parts a bronze tint was very perceptible; internally, it presented a dirty olive colour—the granular structure of the organ being perfectly distinct. Its tissue seemed a little softened, and when pressed, gave out a trifling quantity of thin, bloody fluid; there was no vascular injection. Gall-bladder nearly empty; its lining membrane merely covered with the residuum of rhubarb-coloured bile.

Spleen enlarged, but not softened or congested.

Kidneys healthy.

It will be perceived that, in the five cases above detailed, the peculiar condition of the *liver*, which Dr. Stewardson has assumed as the *anatomical characteristic* of remittent fever, was uniformly found. I am aware that the case last stated is too meagre in its details to deserve much consideration, and that a rigid observer might entertain doubts as to its genuineness. It would not have been introduced, had not its pathological characters corresponded perfectly with what was noticed in the other cases, and had not the history, so far as it could be obtained during life, given me the same impression even before the post-mortem examination was made. Indeed, the symptoms of collapse were so precisely similar to those noticed in two other cases of undoubted remittent fever which presented themselves during the

past season, and one of which terminated fatally, that I think, all things considered, but little doubt can exist on the subject. Two important considerations naturally present themselves here. First, what is the nature of this condition of the liver? The only positive change that I have been able to observe is that of colour—the slaty and bronze tint externally, the olive tint internally. It is true that a slight degree of softening of the tissues seems to exist in connection with this change of colour, but this has, in all my cases, been very moderate in degree, and, in one of the best marked cases of the disease, extremely doubtful. All will admit, I think, who have examined such cases, that there is no evidence of inflammation in the changes noticed, for although some degree of capillary injection existed in two of the cases, yet in the remaining three it was entirely absent. The natural size of the liver, the absence of lymph or pus, the small quantity of blood yielded by pressure, as well as the local symptoms during life, especially the absence of pain and tenderness over the region of the liver, tend to confirm the same idea. It appears to me not an unreasonable conclusion to suppose that the change of colour is produced by the action of the bile, especially when we remember the appearance of this secretion as observed in the gall-bladder.

Another important fact to establish is, whether this appearance of the liver may not be found in other diseases, and particularly in other forms of fever. This question can only be settled by long and multiplied observation. I can only say that, in six fatal cases of continued fever, four of which originated on ship-board and two in this city, no such condition was found, and that after careful examination with this object in view.

Dr. Stewardson, in his Essays, has attached much importance to the pathological condition of the stomach and duodenum, and is disposed to believe that inflammation of the mucous membrane of these organs is an important and frequent feature in the disease. I am unable to confirm this opinion. Most of the changes that I have observed in the mucous membrane of the stomach have appeared to me of a chronic nature, and probably long antecedent to and entirely independent of the acute disease. I refer particularly to the thickened and mammillated condition of the organ. The injection of the mucous membrane, although present in all the cases to a certain extent, did not appear to me beyond what is commonly noticed in other acute diseases, and might, in some cases at least, be referred distinctly to simple post-mortem venous congestion. The symptoms during life appear to me to strengthen this idea. The patients very seldom complained of pain in the region of the stomach, and although slight tenderness on pressure was frequently noticed, yet this did not exceed, I think, what is noticed with equal frequency in other febrile affections. As well might we refer the thirst and loss of appetite that attend all affections of this class to the same cause. The presence of vomiting in many cases might seem at first to strengthen the opinion Dr. Stewardson has formed on this point, yet a

glands of Peyer were carefully examined and found perfectly healthy. The brain and the lungs presented more evidences of disease than the abdominal organs. These cases were reported in the *New York Journal of Medicine and Surgery* for 1839, by Dr. N. Shook, formerly resident physician to the hospital.

The opinion prevails in New York, that inflammation of Peyer's glands may occur, also, in cases of remittent fever. This opinion has been strengthened by the post-mortem examinations made at the hospital, in 1840, by Dr. Richardson, resident physician for that year, and published by him in the above-mentioned Journal for 1841. Six cases of what was regarded as remittent fever, probably all the fatal cases which were examined during the season, are reported, and, *in all*, the glands of Peyer are stated as being affected. I feel inclined to offer some remarks upon these cases even at the risk of appearing tedious.

Case I. was a patient from Bermuda, who died in a state of stupor after having been eight days in the hospital. "The oval plates of Peyer were enlarged through the whole course of the ileum, but none of them ulcerated. The liver was very much enlarged, of a slate colour, and softened." This was probably a case of remittent fever.

Case II. was a patient who came from Richmond, Virginia—who also died while in a state of stupor, about three weeks after admission to the hospital. In this case, "in the lower portion of the ileum, the oval patches were enlarged but not ulcerated. The liver was considerably enlarged, of a dark slate colour, and softened. The gall-bladder was full of dark, tenacious, tar-like bile." This case, also, was probably one of remittent fever.

Case III. was an Irishman, who came from the Croton water-works, and who died on the fourteenth day with symptoms of acute peritonitis, which came on a few hours before death. The case was undoubtedly one of fever, but the symptoms detailed are too meagre to enable me to form any decided opinion as to the form of fever. On post-mortem examination, acute peritonitis from perforation of the ileum was found. "The aggregate glands of Peyer, from the middle of the jejunum to the termination of the ileum, were found in the different stages of disease, from simple enlargement (as in the jejunum) to ulceration, with *elevated, inflamed, irregular edges*, and, in one spot, as above referred to, perforation of all the coats. The mesenteric glands were swollen, and some of them contained pus. The liver of rather *light colour*, not softened. The gall-bladder contained about an ounce of yellow, watery bile." No one, I think, who has been accustomed to examine cases of fever, can fail to detect here the appearances of continued fever. I suspect that the diagnosis of this case was wrong.

careful study of this symptom has brought me to a different conclusion. As the general rule, I think, vomiting occurs early in the disease. In many cases, it appears to have a direct connection with the early chills. The same fact is noticed in cases of intermittent fever, and yet no one can suppose that inflammation has any thing to do with its production, since the patients can eat, drink stimulants, and use quinine with perfect impunity a few hours afterwards. In other cases, it is probable that the attempt to use improper food, which the stomach could not digest, may have induced this symptom in patients not yet subjected to medical treatment. At all events, the vomiting usually ceased after the admission of the patients, or became so infrequent and mild as to require no particular treatment. Finally, this view of the subject is still further confirmed, and this, I think, is the most important point of all, by the ease and evident advantage with which patients were able to use large doses of quinine and stimulants, in many cases during the height of the disease. Indeed, I am disposed to look upon these remedies as our chief dependence in bad cases of remittent fever. Dr. Stewardson also remarks, that traces of inflammation exist on the mucous membrane of the duodenum, and notices particularly an enlarged condition of the mucous follicles. This view, also, I have been unable to confirm. Indeed, so far as the local evidences of inflammation are concerned, the *lungs* were the organ most decidedly affected in the few cases I have examined. In two of the fatal cases, undoubted traces of pneumonia were found.

The mucous membrane of the intestinal canal, excluding the evidences of chronic disease, or of disease that had probably for a long time entirely ceased to exist, was found healthy. The symptoms during life confirmed this opinion. The absence of diarrhœa, of abdominal pain and tenderness, of tympanitis, the ease and even the feeling of relief with which purgatives acted, all go to prove the absence of at least inflammation in those important organs.

There is no point more interesting in the pathology of fever than the condition of *Peyer's glands*. Every one, I suppose, who has examined the subject with attention, will admit that these glands are commonly found inflamed in the continued fever of this country, both in the cases originating on shore and on ship-board during the passage from Europe. Still it is incontestable that cases do occur, principally, perhaps, in an epidemic form, in which these glands are not affected. Dr. Gerhard, of Philadelphia, now happily restored to science, has shown this in an epidemic fever which prevailed in that city a few years ago. The same thing has been also observed in this city under quite different circumstances in an epidemic ship fever which prevailed to a frightful extent on board two vessels bound to this port from Liverpool in the spring of 1836. In one of these vessels, the Garonne, there were two hundred passengers, of whom two-thirds were affected with fever. Twenty of these cases were admitted to the New York Hospital, and five of them terminated fatally. In all of these, the

he soon passed again into a state of stupor and died on the sixth day after admission. The vessels on the surface of the brain were congested; lungs congested—the mucous membrane of the stomach was inflamed. "The mucous membrane of the intestines was reddened and softened throughout the whole track. In the ileum the oval patches of Peyer *were enlarged.* In the colon were numerous small ulcers; liver enlarged, of a dark chocolate colour and softened, bile like thick tar. Spleen enlarged and softened." The condition of Peyer's glands in this case was similar to that noticed in Case I. and II. It was probably a case of remittent fever.

In the above abstract of the six cases reported as cases of remittent fever, I have attempted only to present some of the more important facts. I must beg leave to refer again to the cases themselves for all the rest that is known in relation to them. Those who will take the pains to peruse them carefully, I think will agree with me, that they are generally too imperfectly reported, especially as to their *ante mortem* history, to enable us to form any decided opinion as to their nature. No one knows better than those attached to hospitals the difficulty that frequently attends the diagnosis of diseases; especially when they present many points of resemblance, when they constitute varieties of the same disease as in the present instance, rather than distinct species. The fact that a large number of cases are constantly under observation, while it ought, and with proper attention does, tend to improve the accuracy of diagnosis, will not protect us from the influence of certain prepossessions which may throw us off our guard, and lead us into great error. Thus the daily habit of examining new cases of fever coming from a certain locality, and which are generally found to belong to a certain type, the remittent for instance, may lead us to overlook and confound the occasional cases of a different type that present themselves under the same circumstances. In the New York Hospital the cases of Southern fever, occurring almost entirely among sailors, are placed in the Marine building and usually in the same wards. So that nothing is more easy than for the physician, on entering these wards, and finding a case of fever, to suppose that it is a case of the remittent type, and if the patient is too stupid to give an accurate account of his previous history or even of his present feelings, and death speedily occurs—the observer may continue under the influence of his first ideas, and even carry them to the autopsy room. Yet I am disposed to believe, that cases of genuine continued fever, do originate under circumstances where the causes of remittent fever are most likely to have affected the patient; that their true nature may be entirely overlooked from inattention. This I believe may have happened in some of the cases that I have ventured to criticise above. But that I may not suspect others on a point where I have, perhaps, erred myself, I will state a case where the same error was, I think, committed.

A patient entered one of the wards of the New York Hospital in which cases of remittent fever are usually placed. He had just arrived from a

Case IV. was a sailor, from Darien, Georgia, who had been ill a week. "Nothing definite could be learned of his symptoms before admission. He was found extremely feeble and prostrate; skin yellow; countenance sunken; body emaciated; intelligence pretty good; has no pain, tenderness or swelling of abdomen; bowels open, no diarrhœa; tongue white; pulse very feeble and frequent; extremities cold; very restless. He continued to sink gradually, notwithstanding the free use of stimulants, and died on the fourth day after admission."—"Through the whole length of the ileum, the oval patches of Peyer were enlarged, and, for the space of about twelve inches from the ilco-cæcal valves, were in a *state of ulceration*. The ulcers were of irregular shape, with elevated edges. Liver *congested*; gall-bladder filled with a very thick, tenacious bile; spleen enlarged and softened." The circumstances which favour the idea of remittent fever in this case, are the place of its origin and the yellow state of the skin; but are these conclusive as to its nature? I think not. I think we have had, the past season, in the hospital, a perfectly well-marked case of continued fever, which originated in the region where the remittent fever is also supposed to prevail, (Norfolk, Va.) As to the yellowness of the skin, I shall say nothing. The history of the case is very imperfect; we know nothing of its early history except its origin. After admission, the symptoms were those of sinking, and not in the least characteristic. The post-mortem appearances were those usually noticed in cases of continued fever.

Case V. was also a patient from Darien, Ga., who was taken decidedly ill about two days before admission, having previously complained of slight illness. He soon became delirious, then stupid. In this state he was brought to the hospital. His skin was cool; his pulse of moderate force and not frequent. This state continued for two days under the use of stimulants. He then became restless and delirious, and died in less than twenty-four hours. Marked venous congestion existed in the brain. "In the ileum, the oval patches of Peyer were found enlarged throughout its whole course, and most so in the lower portion near the ileo-cæcal valve. One of these patches presented *numerous small ulcers*. The mucous membrane was not altered between the patches. Spleen three times its normal size, and very much softened. The liver was enlarged, of a dark slate colour, and very much congested with blood." Notwithstanding the very imperfect history of this case, I am, on the whole, inclined to regard it as one of remittent fever, but suspect that actual ulceration, or even inflammation, did not exist. The reason for this opinion I will state in another place.

Case VI. was a sailor just arrived from Wilmington, N. C., who had been ill a few days, but no account is given of his previous symptoms. He was in a state of stupor when he entered the hospital, but soon revived. He continued a little stupid, with accelerated pulse, warm skin and much debility;

the occipital fossa. Veins on the convexity of the brain moderately distended—moderate subarachnoid effusion; a few thread-like adhesions of considerable firmness, between the opposite surfaces of the arachnoid: the membranes peel off naturally. Cortical substance of the usual pale, ash colour. Medullary substance much more dotted with dark points than usual, especially posteriorly; cerebral substance of natural firmness; ventricles not distended: plexus choroides containing vesicles and granules, not congested (*traces of ancient arachnitis; marked venous congestion.*)

Thorax.—Lungs natural; moderate hypostatic congestion; bronchi natural. Heart firm, contracted, containing very little fluid blood. About half an ounce of serum in the pericardium; none in the pleura.

Abdomen.—Stomach of natural size; mucous membrane of an uniform pinkish-brown colour, formed by minute points close together, and covered by a thin layer of dirty viscid mucus; the stomach contained a small quantity of thin yellowish fluid. The mucous membrane was also much more thick and firm than natural, presenting large and prominent transverse folds not easily obliterated by pressure; it was not mammillated, neither were any enlarged follicles noticed. The muscular coat was also thickened, (hypertrophy). The mucous membrane of the duodenum and of the upper portion of the jejunum appeared rather thick and firm, and stained by healthy bile; below the jejunum was natural. The glands of Peyer were generally prominent and enlarged, the elevation and distinctness increasing from above downward. In the neighbourhood of the ileo-cæcal valve they were of a gray colour, with the orifices appearing like black points, and in some portions much thickened, softened and red from capillary injection, but not ulcerated. The mucous membrane in the lower portion of the ileum was much injected, chiefly with venous arborescence, mixed however with bands of bright red, formed by minute capillary points in which the membrane was softened. Large intestines, the seat of considerable venous congestion, otherwise healthy. Larger abdominal veins not congested; mesenteric glands slightly enlarged and red. Liver rather large and soft, containing considerable venous blood; externally of a reddish tint mottled with blue from venous congestion; internally the usual intermixture of red and yellowish spots presented itself. Gall bladder, containing a considerable quantity of dark, greenish bile. Spleen twice the common size, dark blue, congested and a little softened. Kidneys congested, otherwise healthy; bladder full of urine of natural appearance.

Having advocated the possibility of a mistake in the diagnosis of the remittent fever during life, I am still disposed to admit that most of the cases (three or four) published by Dr. Richardson, were cases of this form of fever. It remains now to show, how he might have been led into error, in supposing the glands of Peyer diseased. I suppose that every one will admit that when these glands are affected in fever, that it is a recent affection, the result of acute inflammation, and that we should, of course, expect to find

southern port. Being a foreigner, speaking English but imperfectly, and being besides rather stupid from his disease, the history of his case was very imperfect. It was regarded, however, as a case of remittent fever. The patient continued stupid and soon died. I went to the autopsy with the same impression, but on entering the room, my senior Walker, called my attention to some sudamina upon the neck which had not been before observed. This first excited my suspicion that an error in the diagnosis had occurred. For I had never seen sudamina in any case of remittent fever, although they have been carefully looked for, while they are common in continued fever. The post-mortem examination confirmed this suspicion; all the usual post-mortem appearances of continued fever were found, while those of remittent fever were wanting. I left the autopsy room with my opinion of the case very much modified, to say the least.

Case VI. Daniel Hoffin, ætat. 35 years, native of Finland, seaman, entered the New York Hospital Oct. 6th 1844. The patient, at the time of his admission, was rather stupid, and spoke the English language quite imperfectly. It was only ascertained that he had arrived from Savannah a week previous, and that he had been ill five days.

August 7th.—Complains of headache, checks flushed, considerable dulness approaching to stupor; has bled once or twice from the nose; no yellowness of the eyes. Tongue covered with a dirty white coat, rather dry; pulse 120; skin warm, (early in the morning, pulse 104,) no vomiting, no tenderness or fulness of abdomen. Last evening, calomel grs. x., followed by oil this morning; this produced free passages of a thin dark bilious matter. Respiration pure.

8*th.* Stupor; face flushed and livid; eyes injected, rather yellow; tongue dry and brown; abdomen soft; one stool, copious, of a dark greenish-yellow fluid. Pulse 128, feeble; skin hot. Last evening the pulse was 102, and early this morning 104. Has taken quinine this morning,—ordered twelve leeches to head. Ice.

9*th.* Leeching, although the discharge of blood was free, produced no relief—in the evening the head becoming rather cool, the ice was discontinued—coma, pupils dilated. Patient, as he lies on his back, frequently turns his head with a rapid convulsive motion from side to side. Skin generally warm, but head cool; pulse 132, regular. Bowels freely moved this morning. Blister to nucha.

10*th.* Blister drew well, but no improvement; patient died at 7 A. M.

Post-mortem examination, 4 hours after death. General rigidity; the usual post-mortem lividity about the back and nates; a *few sudamina* noticed about the neck; no tympanitis. The deep cervical glands on the right side were enlarged, with softened tuberculous matter in their interior.

Head.—On removing the skull, a large quantity (6 ounces at least) of dark fluid blood flowed from the sinuses; two ounces of bloody serum in

fever. I believe, however, that those will not think so, who agree with me in believing, that while the most careful attention at the bed side is necessary to the correct diagnosis of disease, yet that the truth of opinions formed there must be confirmed or refuted in the autopsy room. The great value of Dr Stewardson's observations on remittent fever, especially as to the peculiar condition of the liver, if future observation should confirm their correctness, will consist in the aid they afford to the correct diagnosis of the disease. But who shall say that their influence will not also be felt in the treatment? Certainly not those who believe as I do, that the multitude of conflicting opinions as to the treatment of diseases result mainly from errors in diagnosis.

New York, Nov. 1844.

[We append to the preceding very valuable and interesting paper, the following case of remittent fever with the autopsy, communicated, by Dr. Wm. T. Howard, to Dr. Stewardson, through whose kindness we are indebted for it. The anatomical character of the liver coincides entirely with that observed by Drs. Stewardson and Swett.]

Case of Remittent Fever; death; autopsy. By Wm. T. Howard, M. D. —Andros Pope, ætat. 40, a German, and common day-labourer, had been living for some months past, about fifteen miles from Baltimore, in a malarial region of country, annually visited by intermittent and remittent fevers. He was admitted into the hospital, Aug. 16th, 1843. His condition was such, that little satisfactory information could be obtained in reference to the history and mode of attack. It could only be learnt that he had been sick some six or eight days; had had six or eight chills and fevers; suffered much from headache during the febrile paroxysm, and experienced much general uneasiness. At the moment of admission, his mind was wandering, and he complained much of cephalalgia; he had fever, with a pulse of 96 per minute, and considerable tenderness over the epigastrium and right hypochondriac region. The *spleen* was enlarged and felt below the ribs.

Evening of the same day. Skin rather cool and moist; head somewhat clearer, though still painful; tenderness still over the epigastrium and right hypochondrium; pulse 92.

17*th.* This morning, skin hot and dry; great cephalalgia; pulse 96. He was ordered sul. quinine, ℈i., in solution, to be taken at once. One hour afterwards, the skin was slightly moist and cooler. Sul. quinine, ℈i., in solution, was again administered.

Evening of the same day. Skin cool and moist; pulse 85; less cephalalgia. Other symptoms little altered. Sul. quinine, ℈i., was ordered to be given at 12 o'clock. The patient expired about daylight on the morning of the 18th.

something more than simple enlargement of these glands; that we should expect to find softening and injection of the tissues as well as ulceration. In the cases, No. I., No. II, No. V., No. VI., reported by Dr. R., and which appeared to me best marked as cases of remittent fever, both by the history and the post-mortem appearances, especially by the condition of the liver; in three of these, the glands of Peyer are described as simply enlarged without other change. Is this any proof that they were the seat of acute inflammation? By reviewing my cases, it will be found that in four out of five, these glands are spoken of as unusually distinct, but this was owing in three cases to a mere difference in *colour*. They were neither elevated, softened nor injected, but simply by their pale white colour, strongly contrasted with the dirty hue of the surrounding mucous membrane. The explanation appears to me this; that the bile or some other secretion had stained the mucous membrane while the glands were not thus affected. I may, I think, reasonably ask whether this same condition did not exist in some of Dr. R's. cases, and whether this unusual *distinctness* of the glands was not mistaken for enlargement. But in my fourth case, (Mayo,) these glands were enlarged; were evidently hypertrophied; so also was the whole intestinal canal as well as the stomach in all their coats, and this existed with increased firmness of the tissues but without the least appearance of injection or ulceration. There can be no doubt that all these changes were long antecedent to the attack of fever, and if dependent on inflammation at all as to their origin, this had long also entirely subsided. In Case No. V. recorded by Dr. R., and where the slate-coloured liver was found, besides the general enlargement of Peyer's glands, but still with no mention of injection or softening, one patch alone is described as presenting numerous small ulcers. Every one accustomed to examine cases of fever would, I think, be rather surprised to find a single patch only, studded with small ulcers—this is not the usual appearance. But might not these small ulcers have existed only in appearance? I have repeatedly, in examining Peyer's glands, observed a reticulated or honeycombed appearance of their surface which at first presented very much the aspect of small ulcers, but yet which, on careful examination, especially with the microscope, appeared to be nothing more than a slight hypertrophy of the mucous membrane covering these patches, or perhaps even a congenital formation; for with this there was no appearance of disease, especially of recent disease. Finally, in the two cases where distinct and unequivocal evidences of inflammatory ulceration of Peyer's glands existed, (Cases III. and V.) there is much probability, I think, that they were cases of continued fever; the characteristic colour of the liver was entirely wanting; the history of the cases is extremely unsatisfactory; and one of them (Case III.) came from a locality where continued fever was quite as likely to prevail as the remittent form.

In the above remarks some may think that too much stress has been laid on the post-mortem appearances in the diagnosis of the different forms of

ble quantity of mucus stained by bile. The *colon* contained some fœcal matters mingled with mucus, and presented a few points of red injection. The bladder and kidneys natural.

Thorax.—The lungs were in their normal state. Their inferior posterior portions yielded a slight frothy serosity when cut into. The heart and great vessels contained blood not coagulated.

Baltimore Almshouse, Jan. 8th, 1844.

Art. III.—*On the Treatment of Yellow Fever.* By F. Wurdemann, M. D., of Charleston, S. C.

Those who have had frequent opportunities of observing yellow fever, know that it is often modified in different epidemics. It is in one so mild, that patients get well under almost every treatment; while in another, the action of an emetic or drastic cathartic at the commencement of the attack will place the case beyond the control of medicine. The "ten and ten" grain doses of calomel and jalap, which were so successful in the hands of Rush, have long been abandoned by the Southern practitioner; and salts and senega, once a popular remedy, are now only empirically prescribed. The present paper has been written chiefly to show the relative mortality in what may be called the mercurial treatment, and another which I now consider better adapted to the nature of the disease.

If I were asked what was the most prominent pathognomonic symptom in yellow fever, one that most distinguished it from those cases of remittent bilious fever complicated with gastritis, so prevalent during epidemics of the former, I would answer, the total cessation, or the much diminished and vitiated secretion of bile. For although it is sometimes ushered in by bilious vomiting, the bile thus ejected has been mechanically forced from the gall-bladder, where it had been collected previous to the attack. It is very certain that the restoration of the functions of the liver is the most favourable symptom in the course of the disease. The physiognomy of yellow fever differs also from that of the most aggravated cases of remittent bilious fever. In the former, there is a peculiar glassy appearance of the eyes, even when they are but slightly red; an anxious expression of the countenance, that the real or assumed calmness of the patient cannot entirely control; and a constant, but more or less strongly marked torpor of the cutaneous circulation, evinced by the slow return of blood pressed by the finger from the injected capillaries, as if these vessels were in a state of passive hyperemia.

From the prominent symptoms in yellow fever, the effects of remedial